WHAT IS CLAIMED IS:

1. A fluorescent group-containing carbodismide compound precursor having a halogen atom or a sulfonic acid group which is represented by the following general formula (I):

 $B-Y^3-N=C=N-Y^2-W-Y^1-[A]_n-Y^4-X$ (I) wherein,

X represents a halogen atom or a sulfonic acid group;

A represents a functional group selected from the group consisting of -CH2-, -NHCO-, -CONH-, -O-, -S-, -NR1- wherein R1 represents a linear, cyclic or branched saturated or unsaturated aliphatic hydrocarbon group having 1-20 carbon atoms, -NR2R3- wherein R2 and R3 each independently represent a hydrogen atom, a linear or branched saturated or unsaturated aliphatic hydrocarbon group having 1-20 carbon atoms, or a cycloalkyl group, an aryl group or an aralkyl group which may have a substituent, provided that when one of R^2 and R^3 is a hydrogen atom, the other represents a linear or branched saturated or unsaturated aliphatic hydrocarbon group having 1-20 carbon atoms, or a cycloalkyl group, an aryl group or an aralkyl group which may have a substituent, or R2 and R3 may be bonded to each other to form as a whole a nitrogen-containing heterocyclic group which may contain an oxygen atom, -COO-, -OCO-, -NHSO2-, -NHC(S)NH- and -SO2NH-;

n represents 0 or 1;

W represents a direct bond or a quaternary onjum

group;

 Y^1 , Y^2 , Y^3 and Y^4 each represent a functional group represented by the general formula (II):

$$-(CH_3)_p-(L)_r-(CH_2)_q-$$
 (II)

wherein, L represents a functional group selected from the group consisting of $-CH_2-$, -NHCO-, -CONH-, -O-, -S-, $-NR^1-$ wherein R^1 has the same meaning as defined for the formula (I), $-NR^2R^3-$ wherein R^2 and R^3 have the same meanings as defined for the formula (I), -COO, -OCO-, $-NHSO_2-$, -NHC(S)NH- and $-SO_2NH-$; p and q each represent an integer of from 0 to 20; and r represents 0 or 1;

B represents a hydrogen atom or a monovalent organic group being either the same as or different from $-W-Y^1-[A]_n-Y^4-X \ \ \text{in the formula (I); and}$

any of the functional groups represented by B, Y¹, Y², Y³, Y⁴, A and W may contain a group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.

2. A fluorescent group-containing carbodiimide compound having at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom, which is represented by the following general formula (III):

$$B-Y^3-N=C=N-Y^2-W-Y^1-[A]_n-Y^4\frac{R^4+R^5}{X^7}$$
 (III) wherein,

B, Y^1 , Y^2 , Y^3 , Y^4 , A, X, W and n have the same meanings as defined for the general formula (I);

F represents a fluorescent group;

Q represents either a tertiary or quaternary nitrogen atom, or a tertiary or quaternary phosphorus atom;

R⁴ and R⁵ each independently represent a hydrogen atom, a linear or branched saturated or unsaturated aliphatic hydrocarbon group having 1-20 carbon atoms, or a cycloalkyl group, an aryl group or an aralkyl group which may contain a substituent, provided that when one of R⁴ and R⁵ is a hydrogen atom, the other represents a linear or branched saturated or unsaturated aliphatic hydrocarbon group having 1-20 carbon atoms, or a cycloalkyl group, an aryl group or an aralkyl group which may contain a substituent, or R⁴ and R⁵ may be bonded to each other to form a nitrogen—containing heterocyclic group or a phosphorus—containing heterocyclic group, which may contain an oxygen atom, as -0*R⁴R⁵-;

 Y^5 has the same meaning as defined for Y^1 , Y^2 , Y^3 and Y^4 ; and

at least one functional group selected from B, Y^1 , Y^2 , Y^3 , Y^4 , Y^5 , A, W, R^4 , R^5 and F has at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have

substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.

- 3. The fluorescent group-containing carbodiimide compound precursor according to claim 1, wherein at least one functional group selected from B, Y¹, Y², Y³, Y⁴, A and W in the formula (I) has at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.
- 4. The fluorescent group-containing carbodiimide compound according to claim 2, wherein at least one functional group selected from B, Y¹, Y², Y³, Y⁴, A and W in the formula (III) has at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.
- 5. The fluorescent group-containing carbodiimide compound according to claim 2, wherein at least one functional group selected from Y⁵, R⁴, R⁵ and F in the formula (III) has at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal,

an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.

- 6. A method for producing the fluorescent group-containing carbodiimide compound precursor as defined in claim 1, which comprises the following steps (A), (B) and (C):
- (A) a step of synthesizing a (thio)urea compound represented by the following general formula (VI) through a reaction of an iso(thio)cyanate compound represented by the following general formula (IV) with an amine compound represented by the following general formula (V):

wherein, B, Y¹, Y², Y³, Y⁴, A, W and n have the same meanings as defined for the formula (I); T represents an oxygen atom or a sulfur atom; and Z represents a hydroxyl group, an alkyl group, an alkenyl group, a vinyl group, an allyl group, a phenyl group, a carboxyl group, a sulfonyl group-containing derivative group or a phosphonium group;

(B) a step of halogenating or sulfonating the compound represented by the general formula (VI) obtained in the step (A) to prepare a compound represented by the following general formula (VII):

 $B-Y^{3}-NHCNH-Y^{2}-W-Y^{1}-[A]_{n}-Y^{4}-X$ (VII)

reaction.

wherein, B, Y¹, Y², Y³, Y⁴, W, A, n and X have the same meanings as defined for the formula (I); and T represents an oxygen atom and or a sulfur atom;

(C) a step of carbodiimidating the compound represented by the general formula (VII) obtained in the step (B) by dehydration or oxidative desulfurization

- 7. The production method according to claim 6, which produces the fluorescent group-containing carbodiimide compound precursor as defined in claim 3, wherein at least one functional group selected from B, Y¹, Y², Y³, Y⁴, A and W has at least one group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.
- 8. A method for producing the fluorescent groupcontaining carbodiimide compound as defined in claim 2, which comprises a step of:

selecting a carbodiimide compound and a fluorescent group-containing compound from the fluorescent group-containing carbodiimide compound precursor as defined in claim 1 and a fluorescent group-containing compound represented by the following general formula (VIII):

 $Q'R^4R^5-Y^5-F$ (VIII)

wherein, R4, R5, Y5 and F have the same meanings as defined for the general formula (III), and Q' represents a secondary or tertiary nitrogen-containing group or a secondary or tertiary phosphorus-containing group which may have substitution of a group selected from a hydroxyl group, an alkyl group, an alkenyl group, a vinyl group, an allyl group, a phenyl group, a carboxyl group, a sulfonyl group-containing derivative group and a phosphonium group, respectively, so that at least one of the carbodidimide compound and the fluorescent groupcontaining compound should have a functional group selected from a carboxyl group, a sulfo group, a phosphono group and a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom, to allow the carbodidimide compound and the fluorescent group-containing compound to react with each other.

9. The production method according to claim 8, which produces the fluorescent group-containing carbodiimide compound as defined in claim 4, wherein at least one functional group selected from B, Y¹, Y², Y³, Y⁴, A and W has at least one group selected from a carboxyl group, a sulfo group, a phosphono group or a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.

- 10. The production method according to claim 8, which produces the fluorescent group-containing carbodiimide compound as defined in claim 5, wherein at least one functional group selected from Y⁵, R⁴, R⁵ and F has at least one group selected from a carboxyl group, a sulfo group, a phosphono group or a phospho group which have substitution of an alkali metal, an alkaline earth metal or a basic group containing a nitrogen or phosphorus atom.
- 11. A method for detecting a nucleic acid by hybridization utilizing a nucleic acid labeled with a labeling substance, wherein the fluorescent group-containing carbodiimide compound as defined in claim 2 is used as the labeling substance.
- 12. The method according to claim 11, wherein the fluorescent group-containing carbodiimide compound as defined in claim 4 is used as the labeling substance.
- 13. The method according to claim 11, wherein the fluorescent group-containing carbodiimide compound as defined in claim 5 is used as the labeling substance.